The Mormons' City.—Three years ago the Mormons arrived in Salt Lake Valley, in the "Rocky Mountains," and their progress in laying out a city, buildings, fencing farms, raising crops, &c., is truly wonderful, and is another striking demonstration of the indefatigable enterprise, industry, and perseverance of the Anglo-Saxon race. The *New York Inquirer* says, "The city is laid out in about twenty different wards, and covers an area of three square miles. It already contains about 1,000 houses, nearly one story and a half high, built of adobe, or sun-burnt brick. A fine stream of cold water rushes down from the mountains, which is distributed in ditches through every street in the city, through the gardens, and to the doors of the dwellings, where it is used for culinary and other purposes. The ground whereon the city is built is sloping, which affords a great fall for the water, the current through the ditches running at the rate of about four knots an hour, and keeps up a continual supply of fresh water from the mountains. The valley where the city stands is quite handsome, running east and west. The city is situate about three miles from the Timpanegos Mountains on the east, within five of the Utah outlet on the south-east, and within twenty miles from the range of mountains on the south, within twenty-two miles of the great Salt Lake. Its population is about 5,000, that of the valley 10,000, exclusive of the city. The Mormons are now building a new stone state house, two stories high, and its dimensions are 40 by 90 feet. Most of the city is fenced, every half-square mile being under one enclosure, almost every foot of the ground (except where the house stands) being occupied with grass and vegetables. There are several stores kept here. Mechanics of different trades are busily engaged."

Motion by Galvanism.—It is announced in the *Madras Spectator*, Sept. 13, that a person in that town has discovered a substance which he calls *fibre* (what it is remains a secret), which, under galvanic action, contracts suddenly to one-fourth of its length, "its power being equal to 100 lbs. on every square inch of its sectional surface." The inventor has constructed a model engine, to show the application of the new motive power. A reciprocating beam attached to an ordinary crank, with fly-wheel of about 4 feet in diameter, is fitted at each end with a cylindrical piece of the fibre, insulated by a plate of glass. Near the frame is a small galvanic battery. Operations are began by giving a shock from this battery to one of the pieces of fibre, which immediately and violently contracts, drawing the beam down on that side, and of course communicating motion to the crank and fly-wheel. So soon as the centre has been turned, another shock given to the opposite piece of *fibre* continues the motion, and the shocks being alternately repeated, the fly-wheel soon gains an enormous speed.

Improvements in Bell-Hanging.—A variety of improvements in the fitting up of bells, &c. have been introduced by Messrs. Bryden and Sons, Rose-street, Edinburgh, models of which are to be sent to the Great Exhibition. The first is an index dial bell, with eight indicators: one bell only is thus required for any number of apartments. The "manifold bell-pull" is a contrivance by which one pull is made to ring bells in eight or any greater number of rooms: when the pointer is placed opposite any name on the dial-plate, and the knob pulled, the bell is then rung only in the room indicated. Another contrivance is the circular telegraph bell, by means of which any one or all of eight different clerks or workmen may be called.

Railway Jottings.—From the annual report of the Commissioners of Railways recently issued, it appears that 625 miles have been added to the 5,996 miles of railway open at the commencement of last year in the three kingdoms: of these, 477 have been opened in England, 104 in Scotland, and 44 in Ireland. The whole length authorized up to December, 1850, those abandoned inclusive, was 12,102 miles. The number of employees has been [illegible] from 12·3. per mile in 1848 and 10·27 in 1849 to 9·56 in 1950. Including those engaged on lines not opened for traffic, an aggregate of upwards of 190,000 persons have been thrown out of employment previously had on railways since May, 1847. The total number of persons killed upon railways during the past year has amounted to 216, and of persons injured to 256. Several explosions of the boilers of locomotive engines have been reported to the commissioners as having taken place. The most fruitful cause of accidents on railways is want of punctuality on lines where trains are run according to fixed time-tables. The Commissioners approve of excursion trains. They have adopted the rule, however, of approving them only as regards the third-class fares: they think that first and second class fares, as well as third, might be less than one penny a mile. They do not object to any improvement in the construction or fitting up of the third-class carriages calculated to afford greater convenience or comfort to the passengers; but it appears to them that persons willing to pay a higher rate of fare for first or second-class accommodation, when they have the choice of third at lower fare by same train, cannot properly be considered as the *bonâ fide* "poorer class" to which the Act has reference.——In the Court of Queen's Bench on Saturday, in Banco, judgment was given in *The Queen* v. *The Midland Railway*. The Court were of opinion that the rate must be a local one, restricted to each parish, according to the net receipts derived from the line in that parish, after the usual and proper deductions have been made; and that it would be manifestly unjust to divide the whole receipts of the line amongst the different parishes, by which a parish through which the line is worked at a loss would have the same benefit as a pariah in which it was worked at a large profit.

Electro-telegraphic Progress.—The project for the formation of a second line of electric telegraph from Liverpool to London we understand is receiving a large measure of support.——From the evidence laid before the Privy Council relative to Wheatstone and Cooke's patent, it appears that the Electric Telegraph Company, so far from being a disastrous, is an exceedingly prosperous enterprise. During the first five years of its career the company received for patent rights from railways, 122,285*l.*; profit repairs, 7,301*l.*; profit on erections, 40,747*l.*; or a total profit of 170,333*l.* Profits on its commercial telegraph were, during three years, 20,179*l.*; and during 1850 the profits on the same line, after payment of 33,447*l.* expenses, were 10,086*l.*, or 10 per cent. on the 104,229*l.* paid-up capital of the company.——A memorial to the directors of the London and North-Western Railway Company, praying the directors not to grant the exclusive use of the London and North-Western Railway to any single telegraph company whatever, but to allow other telegraph companies to have their wires along these lines of railway, has received the signatures of many of the leading merchants and bankers of Liverpool.

Our Scene-Painters and our Streets.—At the dinner given to Mr. Macready on the 1st instant, whereat a crowd of the leading spirits of the age congregated to do parting honour to a great actor and accomplished man, his Excellency Mr. Van de Weyer, in the course of his speech proposing "The Artists and Sir Charles Eastlake," said,—"We all know how linked together are all the arts, and when dramatic poetry unites to painting, sculpture, architecture, and music, it conduces to the most ennobling pleasure that the mind can enjoy. Alluding to the relations of art with the stage, allow me to make one incidental remark. It is impossible for the foreigner who visits your theatres not to be struck with the extraordinary talent, the real genius, displayed by your artists in scenic decoration,—the richness of the imagination, the colouring, and the beauty of the architecture,—the last of which qualifications I have often wished to see transferred from your stage to your streets, where, I must confess, there are some architectural enormities which doubtless weigh as heavily upon your soil as I dare say they do upon the mistaken artists who perpetrated them."—Sir C. Eastlake, in his reply, said, he fully concurred with him in his remarks on the subject of theatrical decorations. He also agreed in his recommendation that the architectural scenery of the stage should be transferred to our streets, and might remind them, too, that that practice was common in Italy in the highest period of her art.

The Sculptures at Wells Cathedral.—One of the large statues, weighing nearly a ton, on the west front of Wells Cathedral, fell from its niche last autumn, not long after the judges had left, the day of assize, and was broken into a multitude of pieces: so thoroughly shattered was it, that the authorities there concluded that its restoration was impossible, but called in Mr. E. Richardson to see what could be done. Piece by piece it has been carefully bedded together, and cramped and bolted; and the statue of (it is said) King Edward, son of Alfred, is erect again, and nearly ready for replacing in its niche. It measures 8 feet 6 inches in a sitting position, holding apparently a great or deed on the right knee, the right hand resting upon it, while the left is holding the fastening of the mantle. The extent to which the interior of this cathedral has been renovated, and the generally sound state of the exterior, excepting the west front, will, it is to be hoped, induce attention to this beautiful and unique example, before further reductions take place by decay and similar accidents to that above described.

The Trigonometrical Survey.—The Royal Society of Scotland have fallen into an error with regard to the Irish survey having been "brought to a close" in 1843. The work is not even yet finished, and there is no likelihood of its being so for the next dozen, perhaps twenty years. A large number of men under a captain of the Royal Engineers are still employed on the revision of the northern counties, which were first published in rather a skeleton form. The force employed there now are supplying the omitted detail, and I believe *contouring*, which latter operation has to be conducted over the whole country.—A Subscriber.

Ransome's Brickmaking Machines in India.—The *Delhi Gazette* and the *Friend of India* give some account of certain difficulties with the native caste of brick moulders in preparing about 100,000,000 of bricks for the great works at Roorkee; and of the way in which these difficulties were overcome by Col. Cautley, who purchased of Messrs. Ransome and Parsons, of Ipswich, one of "Hale's patent" machines, of which that well-known firm is both the manufacturers and the patent proprietors. The machine in question not only succeeded admirably, turning out upwards of 10,000 perfect bricks every day, or doing the work of 12 brick moulders, but brought the fractious natives to their senses, and made them both more willing and more industrious in the face of their tremendous rival. Other machines, however, were made, from Messrs. Ransome's model, in India, and also set to work. The saving to Government by the use of these machines on this single undertaking alone is estimated at nearly a lakh of rupees; and it is thought that "Any enterprising individual who would construct and work a few of these machines in Bengal, would bring down the price of bricks, to the great benefit of the public, and not less perhaps to himself."

Illuminating Gas-stove.—The idea of the atmopyre, first given in our columns, appears to have been followed out at Scarborough, in a design, by Mr. G. Knowles, of a gas apparatus, for the simultaneous supply of light and heat. In form his invention resembles the cylindrical-shaped stoves in ordinary use. The burners are placed between two cylinders, the outer one of glass and the inner one of glass or polished metal, acting as a reflector. The heat produced is sufficient, it is said, for all ordinary purposes, and is tempered and the air purified through a water cylinder, so as to be comparatively innocuous and agreeable when respired. The expense of combustion is stated to be 3d. in twelve hours (gas at 6s. 8d. per 1,000 feet). The design has been registered. The *Scarborough Gazette* gives further particulars of this invention.